

February 8, 2000

Mr. Chuck Schwer VT Department of Environmental Conservation Waste Management Division 103 South Main St./ West Bldg. Waterbury, VT 05671-0404

RE: Initial Site Investigation Report, Black River Produce, Route 103, Proctorsville, Vermont, VTDEC Site No. 99-2622

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Dear Chuck:

Enclosed please find the *Report on the Initial Site Investigation of Suspected Subsurface Petroleum Contamination* for Black River Produce in Proctorsville, Vermont. Mr. Bernie Pelletier requested that we forward a copy to you. Please call if you have any questions or comments.

Sincerely,

Timothy J. Kelly, PG

Staff Geologist

Encl.

cc:

Bernie Pelletier(w/o encl.)

GI #89941586

INITIAL SITE INVESTIGATION OF SUSPECTED SUBSURFACE PETROLEUM CONTAMINATION AT BLACK RIVER PRODUCE

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FEBRUARY 4, 2000

Site Location:

Black River Produce Route 103 Proctorsville, VT

VTDEC SITE #99-2622 GI Project #99941586

Prepared For:

Earth Brothers, Limited PO Box 188 Proctorsville, VT 05153

Prepared By:





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I. INTRODUCTION

This report provides a summary of the tasks completed for the site investigation of suspected subsurface petroleum contamination at Black River Produce, located in the village of Proctorsville, Vermont (see Site Location Map in Appendix A). The following tasks were performed by Griffin International, Inc., (Griffin) as part of this investigation:

- monitoring well installation;
- ◊ site survey;
- determination of groundwater flow direction and gradient;
- groundwater sampling and analyses;
- ◊ sensitive receptor survey.

The work for this site investigation was performed based on a request from Mr. Chuck Schwer of the Vermont Department of Environmental Conservation (VTDEC) in a letter to Mr. Bernie Pelletier of Black River Produce dated June 24, 1999. Work for the initial site investigation was performed in accordance with Griffin's July 23, 1999, Work Plan and Cost Estimate for Initial Site Investigation of Suspected Subsurface Petroleum Contamination. Approval to proceed with this work was given by Mr. Bernie Pelletier in a phone conversation to Mr. Timothy Kelly of Griffin on September 24, 1999.

Subsurface petroleum contamination was detected in May of 1999 at this site during the removal of one (1), 10,000-gallon fuel oil underground storage tank (UST).

II. SITE BACKGROUND

A. Background Information

One 10,000-gallon fuel oil UST was removed for reuse recertification at the subject property on May 17, 1999. The UST was in excellent condition with the coating largely intact and no rust or corrosion observed on the tank itself. No holes were observed in the tank. The piping was in excellent condition with no breakage and minimal corrosion observed. The UST was recertified and reinstalled at another on-site location.

Minor petroleum odors and darkening of soils were noted in the soils from the vicinity of the dispenser pump. No petroleum staining was noted in the soils from the excavation.

Volatile organic compound (VOC) concentrations, measured with an HNuTM photoionization detector (PID) equipped with a 10.2 eV bulb, were detected in the headspace of soil screening samples at concentrations exceeding the VTDEC Sites Management Section guidance criteria of 10 parts per million volume (ppmv) for soils associated with a diesel/fuel oil contamination source. Soil types in the excavations consisted of light brown, fine to medium sand, with a little gravel and cobbles from grade to approximately 8 feet below grade, sand and gravel from 8 feet below grade to approximately 9 feet below grade, and fine sand from 9 feet below grade to



approximately 9.5 feet below grade. Groundwater was observed in the tank excavation at a depth of approximately 9 feet below grade. Excavated soils were backfilled into the UST pit. Based on the data obtained during the UST closure inspection, it is likely that the source of the contamination was from minor spills during vehicle refueling.

B. Site Description

Black River Produce is located in the village of Proctorsville, directly adjacent to Route 103. The property is generally flat and consists of a main building which houses a retail store, produce shipping, storage, and receiving areas, a refueling station, and repair bays for the shipping trucks owned by Earth Brothers, Limited.

Based on field observations and a review of the United States Geological Survey (USGS) Ludlow, VT, topographic map [1], groundwater beneath the site is inferred to flow to the southeast, towards the Black River, which abuts subject site to the southeast. The subject site is located at approximately 930 feet above sea level.

The site is bordered on the north by railroad tracks, across which are several residential properties. The site is bordered on the east by an open gravel lot and woodland, across which is the Black River. The site is bordered on the south by Route 103, across which is woodland and the Black River. The site is bordered on the west by a commercial property and parking for Black River Produce. Properties in the site vicinity are serviced by town water.

C. Site Geology

Based on a review of the Surficial Geologic Map of Vermont [2], the site is underlain by glaciofluvial outwash gravel. According to the Bedrock Geologic Map of Vermont [3], the subject property is underlain by a carbonaceous mica schist member and the fine to medium-grained biotite gneiss of the Barnard member, both of the Ordovician Missisquoi Formation.

III. INVESTIGATIVE PROCEDURES

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A. Monitoring Well Installation

On October 19, 1999, three monitoring wells (MW-1 through MW-3) were installed by Adams Engineering of Underhill, Vermont, using a vibratory drill rig. Drilling and well construction were directly supervised by a Griffin geologist. Soil samples were collected in five-foot intervals. Soil samples were screened for VOCs using an HnuTM Model HW-101 PID equipped with a 10.2 eV bulb. Soils were screened using the Griffin Jar/Polyethylene Bag Headspace Screening Protocol which conforms to state and industry standards. Contaminant concentrations and soil characteristics were recorded in a detailed boring log by the supervising Griffin geologist (see Well Logs, Appendix B). No soil samples were submitted for laboratory analysis.

The monitoring wells were installed in the vicinity of the former UST location to assist in defining the degree and extent of residual subsurface petroleum contamination. Monitoring well



MW-1 was installed as near as possible to the former UST location. MW2 and MW3 were installed in presumed downgradient directions from the former UST location.

Subsurface conditions encountered in the borings consisted mainly of silty sand with local gravel, well-grade sand with silt and gravel, and silt. Groundwater was estimated to be located at approximately 8 feet to 9 feet below grade on the day of drilling. Bedrock was not encountered during the drilling for monitoring wells MW-1 through MW-3. The monitoring wells were installed to depths ranging from 11.5 feet below grade to approximately 14.5 feet below grade.

No VOCs were detected above PID detection limits in screened soils from the borings for these three monitoring wells.

Each monitoring well was constructed with a ten-foot length of 0.010-inch, factory slotted, 1.5-inch diameter, PVC screen installed with its midpoint at the approximate water table. The wells were completed to one-half foot below the ground surface with Schedule 40, 1.5-inch diameter, PVC, flush-threaded riser. A silica sand pack was placed in the annulus of the well between the borehole wall and the screen to a level approximately one foot above the top of the screened interval. A bentonite seal was placed above the sand pack to isolate the screened interval and prevent migration of surface runoff water into the well. The wells were completed to the ground surface with a flush-mounted road box. Well construction details are summarized on the Well Logs in Appendix B.

B. Determination of Groundwater Flow Direction and Gradient

The monitoring well locations and elevations were surveyed on October 19, 1999, for inclusion on the Site Map (Appendix A). The top of PVC casing in MW-1 was assigned an arbitrary elevation of 100.00 feet. Prior to groundwater sampling on November 9, 1999, the measured depths to water ranged from approximately 7.00 feet below top of casing (btoc) (MW2) to 7.25 feet btoc (MW1). Liquid level measurement data are tabulated in Appendix C. Free-phase petroleum product was not observed on groundwater during the well gauging and sampling event.

For each well, the measured depth to water was subtracted from the surveyed elevation of the measurement reference point to determine the water table elevation. Water table elevations were plotted on the site map to generate a Groundwater Contour Map (Appendix A). Based on groundwater level measurements, groundwater at the site was determined to flow in southeasterly direction, toward the Black River at an approximate gradient of 0.2 %.

C. Groundwater Sampling and Analysis

On November 9, 1999, groundwater samples were collected from the three on-site monitoring wells and submitted to Endyne, Inc. of Williston, Vermont, a state-certified laboratory. The samples were collected according to Griffin's groundwater sampling protocol, which complies with industry and state standards. The samples were analyzed for VOCs by EPA Method 8021B and for total petroleum hydrocarbons (TPHs) via EPA Method 8015 for diesel range organics (DRO). In accordance with VTDEC protocols and for quality assurance/quality control



(QA/QC) purposes, a duplicate sample and a trip blank were also collected and analyzed for VOCs by EPA Method 8021B. Groundwater analytical data are tabulated in Appendix D. The groundwater analytical laboratory report is included in Appendix E.

Analytical results of the trip blank and duplicate sample support that adequate QA/QC measures were maintained throughout sample collection and analyses.

No VOCs were not reported above laboratory detection limits in the groundwater samples collected from monitoring wells MW1, MW2 or MW3. No TPHs were not reported above laboratory detection limits in the groundwater samples collected from monitoring wells MW1, MW2 or MW3.

IV. EVALUATION OF POTENTIALLY SENSITIVE RECEPTORS

A visual survey of the area surrounding Black River Produce was conducted in October 1999, in conjunction with the monitoring well installation activities. Based on these observations, an estimation of the potential risk to identified receptors was made based on proximity to the source areas, groundwater flow direction, and contaminant concentration levels in subsurface soils and groundwater.

Water Supplies

The Black River Produce site and the properties in the site vicinity are serviced by town water which is not considered at risk.

Buildings in the Vicinity

One building is located on the subject site. This is the main building which houses a retail store, produce shipping, storage, and receiving areas, a refueling station, and repair bays for the shipping trucks. This building is constructed slab-on-grade with no basement. Given the very low source area strength and the lack of a basement, the Black River produce building is anticipated to be at a low risk.

Surface Water

The nearest surface water body is the Black River, located along the eastern border of the site. Griffin did not observe any petroleum sheens on the surface water, discoloration on the shore, or stressed vegetation (in association with petroleum) on the day of the survey.

No wetlands or drainage ditches were observed on the day of the inspection. Given the very low source area strength, the Black River is anticipated to be at a low risk from the subject site.

Utility Corridors



Groundwater at the site is located at approximately seven feet below grade, below the general approximate depth of utility lines. There are no known underground utilities in the downgradient vicinity of the source area, and therefore the potential for dissolved contaminant migration through utility corridors is considered minimal. Given the absence of free phase product and the low levels of dissolved petroleum contamination in the former source area, the potential for significant vapor migration along utility corridors is considered to be negligible.

V. CONCLUSIONS

Based upon the results of the above investigative tasks, Griffin presents the following conclusions:

- 1) The source of petroleum contamination detected in soils at the Black River Produce site was the use of the 10,000-gallon diesel UST system at its former location on the property. The release(s) appears to be the result of minor spills or overfills due to normal usage over time. The volume of product released is unknown but does not appear significant. The source of petroleum contamination in the vicinity of the former UST location (i.e., the UST system) was removed on May 17, 1999. The former location of this UST is now covered by the concrete slab constructed as part of an addition to the Black River Produce building.
- 2) VOC readings of soils collected during the UST closure on May 17, 1999, indicate that small amounts of adsorbed petroleum compounds existed in soils in the immediate vicinity of the former diesel UST and dispenser pump. With the source removed, it is expected that adsorbed petroleum compound concentrations will decrease over time with the progressive action of natural mitigative processes including biodegradation, volatilization, and diffusion.
- 3) Three groundwater monitoring wells, MW-1 through MW-3, were installed by Griffin at the Black River Produce site on October 19, 1999. No VOCs were detected in soils collected for screening from the MW-1, MW-2, and MW-3 soil borings.
- 4) The depth to groundwater measured on November 9, 1999, in the three on-site monitoring wells ranged from approximately 7.00 to 7.25 feet below grade. The shallow groundwater flow beneath the site on this date was estimated to be directed toward the southeast at a hydraulic gradient of approximately 0.2%.
- 5) No free-phase product was observed in the on-site monitoring wells by Griffin on November 9, 1999.
- 6) Groundwater samples were collected from the three on-site site monitoring wells on November 9, 1999. No VOCs or TPHs were detected in samples collected from MW-1, MW-2, or MW3. Two unidentified peaks were identified in the MW-1 and MW-3 sample analyses and three unidentified peaks were detected in the MW-3 sample analysis.
- 7) Based on field observations during the UST removal and this site investigation, and the analytical results, the minimal residual petroleum impacts observed during the UST removal



inspection are not present in soil beneath the site outside the immediate vicinity of the former UST pit. There are currently no sensitive receptors which are affected by subsurface petroleum contamination from the former 10,000-gallon diesel UST at Black River Produce.

- 8) No on-site groundwater resources are currently in use at this site. The site is served by town water.
- 9) There appear to be no significant potential risks to the identified sensitive receptors based on currently available data.

VI. RECOMMENDATIONS

Based upon the above conclusions, Griffin recommends that the Black River Produce site in Proctorsville, Vermont, be considered for closure and be removed from the VTDEC Active Hazardous Waste Sites List. This recommendation is offered based upon achievement of the following closure criteria, as per the VTDEC Site Management Activity Completed (SMAC) Checklist (dated December 1, 1997):

1) The source(s), nature, and extent of petroleum contamination at the site has been adequately defined.

See Conclusions #1, #2, #3, #5, #6, and #7.

2) Source(s) has been removed, remediated, or adequately contained.

See Conclusions #1, #3, and #6.

- 3) Levels of contaminants in soil and groundwater shall be stable, falling, or non-detectable. See Conclusions #3, #5, #6, and #7.
- 4) Groundwater enforcement standards are met at the following compliance points:

Any point of present use of groundwater as a source of potable water: See Conclusions #5, #6, and #8.

Any point at or within the boundary of any Class I groundwater area: The Black River Produce site is not within a Class I groundwater area.

Any point at the boundary of the property on which the contaminant source is located: See Conclusion #5 and #6.

5) Soil guideline levels are met. If not, engineering or institutional controls are in place. See Conclusion #1 and #3.



6) No unacceptable threat to human health or the environment exists on site.

See Conclusions #1, #3, #5, #6, #7, and #8.

7) Site meets RCRA requirements.

Available records indicate that the Black River Produce site is not in violation of the Resource Conservation and Recovery Act (RCRA) as defined in 40 CFR 264.

8) Site meets CERCLA requirements.

Available records indicate that the Black River Produce site is not in violation of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) as defined in 40 CFR 300.

In addition, Griffin recommends that the three site monitoring wells be properly abandoned according to VTDEC requirements for well closure.



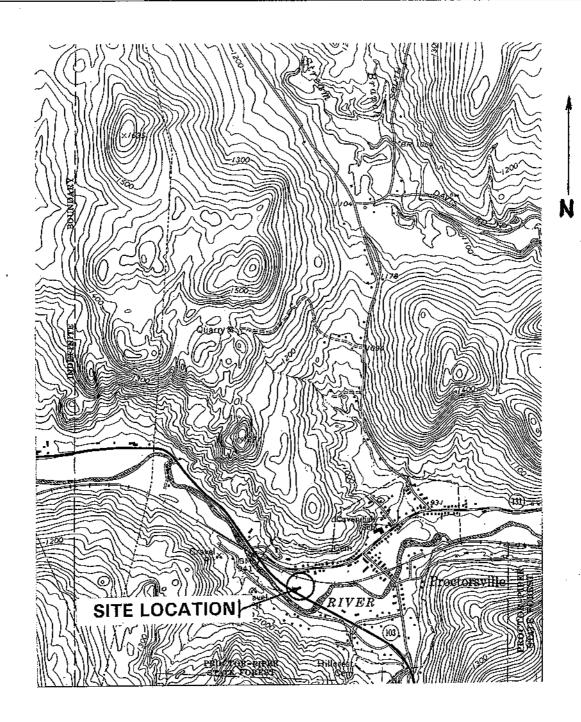
VII. REFERENCES

- 1) USGS 7.5 Minute Topographic Quadrangle Map, Ludlow, Vermont, 1971.
- 2) Dolf, Charles G., ed., 1961, Centennial Geologic Map of Vermont, Vermont Geological Survey.
- 3) Doll, Charles G., ed., 1970, Surficial Geologic Map of Vermont, Vermont Geological Survey.



APPENDIX A

Site Maps

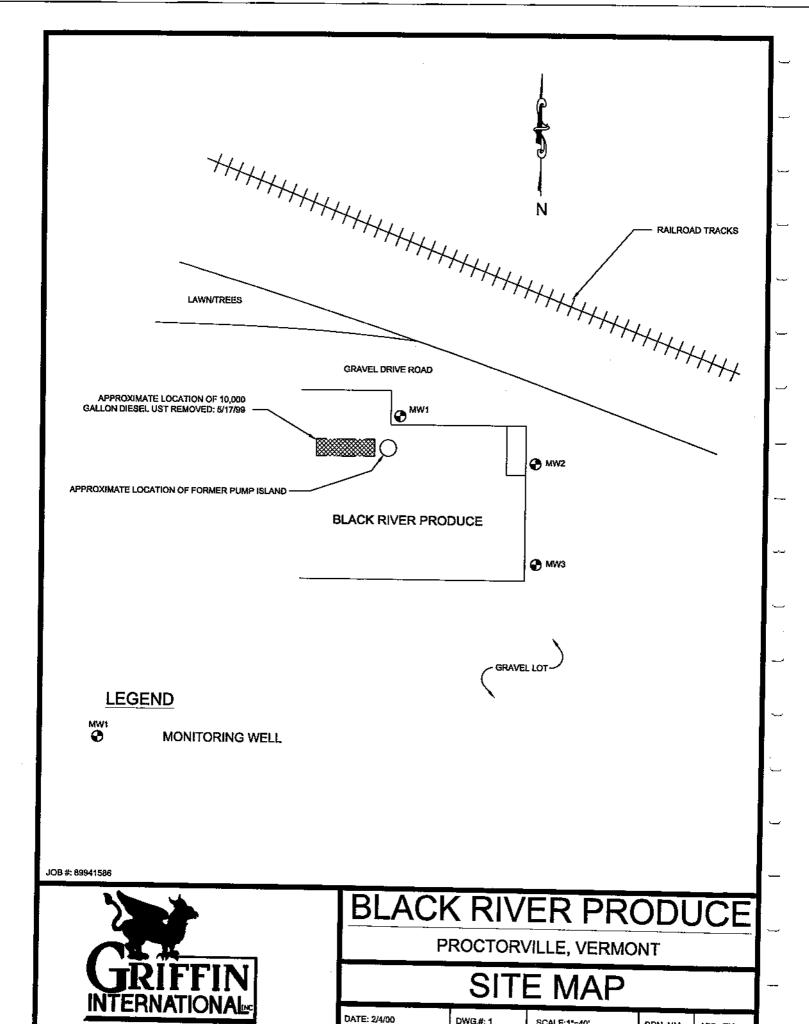




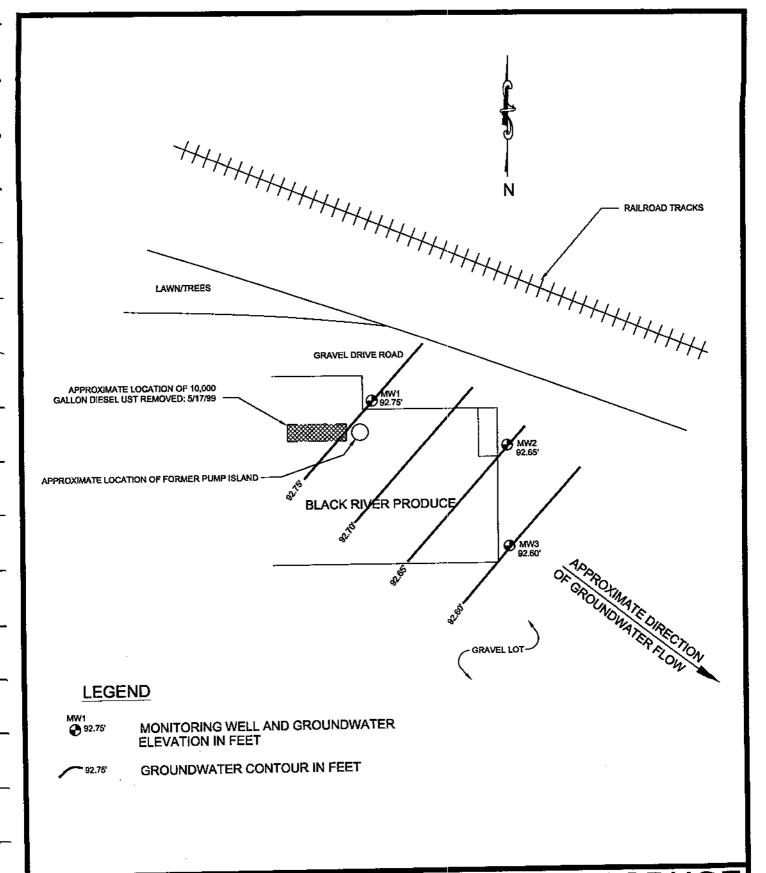
SITE LOCATION MAP

BLACK RIVER PRODUCE PROCTORSVILLE, VERMONT

Ludlow (1971), VT., USGS QUADRANGLE MAP 1:24,000 (1"=2,000")



DWG.#: 1 SCALE:1"=40' DRN.:NM APP.:TK





BLACK RIVER PRODUCE

PROCTORVILLE, VERMONT

GROUNDWATER CONTOUR MAP

SAMPLED: 11/9/99

DATE: 2/4/00

DWG.#: 2

SCALE:1"=40"

DRN.:NM APP.:TK



APPENDIX B

Monitoring Well Logs

BORING LOG AND WELL CONSTRUCTION DIAGRAM Well No: MW-2 BLACK RIVER PRODUCE Project #89941586 PROCTORSVILLE, VERMONT 10/19/99 Griffin Project #: 89941586 Date Installed: Drilling Method: Vibratory Direct Push Drilled by: Griffin International Graphic Symbol Boring Diameter.: 2.75* Driller: Gerry Adams Letter Symbol Development Method: Peristaltic Pump Supervised by: TJK 10 Ft. Screened Length: Logged by: TJK **Soll Characteristics** Pen/Rec (') interval (') Well Construction Blow Count PID (ppm) Gravel Surface Grade = 0 SM SILTY SAND (SM) --5/2.2 0 + 5.0 0.40 light brown, moist 0.80 1.20 -t<Grad 1.60 2.00 2,40 2.80 3.20 3.60 4.00 4.40 4.80 WELL-GRADED SAND WITH SILT AND GRAVEL SW 5/2.4 5.0 - 10.0 5.20 SM (SW-SM) -- medium brown, moist, concrete clast @ 5.60 5.1 feet 6.00 7.00 6.40 6.80 \forall 11/9/99 7.20 7.60 8.00 8.40 8.80 9.20 9.60 SM RR SILTY SAND WITH GRAVEL (SM) --10.0 - 14.0 4/1.8 10.00 medium brown, wet 10.40 10.80 11.20 11.60 12.00 12.40 12.80 13.20 13.60 Base of Exploration. 14.0 14.00 14,40 14.80 15.20 15.60 16.00 Ledgend Locking Plug. Road Box with Bolt Down Cover, Set in Cement. 1.5" ID, Schedule 40 PVC Riser. Existing Surface. 1.5" ID, Schedule 40 PVC, 0.010"-Slotted Well Screen Bentonite Seal Placed in Annulus. Grade #1 Silica Sand Pack Placed in Annulus. Drill Cuttings Placed in Annulus.

Approximate Water Level During Drilling

Static Water Level

NA - Not Available due to PID Malfunction

BORING LOG AND WELL CONSTRUCTION DIAGRAM Well No: MW-1 BLACK RIVER PRODUCE PROCTORSVILLE, VERMONT Project #89941586 Griffin Project #: 89941586 Date Installed: 10/19/99 Drilled by: Griffin International Drilling Method: Vibratory Direct Push Driller: Gerry Adams Boring Diameter.: 2.75" Graphic Symbo Supervised by: TJK Development Method: Peristaltic Pump etter Symbol Logged by: TJK Screened Length: 10 Ft. Well Construction Pen/Rec (*) Interval (*) Soil Characteristics Blow Count PID (ppm) Grade = 0 Gravel Surface 0.40 5/2.7 0 - 5.0 SILTY SAND (SM) --SM 0.80 light brown, moist 1.20 1.60 2.00 2.80 3.20 4.00 4.40 4.80 5.20 5/2.7 5.0 - 6.2 SILT (ML) -- medium brown, moist, roots, stratified ML 5.60 6.00 6.2 - 10.0 WELL-GRADED SAND WITH SILT AND GRAVEL SW 6.40 (SW-SM) -- medium orange-brown, moist SM 6.80 7.25' A 7.60 11/9/99 8.00 8.80 9.20 9.60 10.00 5/2.4 SILTY SAND WITH GRAVEL (SM) --10.0 - 13.5 SM 10.40 medium brown, wet, stratified 10.80 11.20 11.60 12.00 12.40 12.80 13.20 13.60 13.5 Base of Exploration. 14.00 14.40 14.80 15.20 15.60 16.00 Ledgend Road Box with Bolt Down Cover, Set in Cement, Existing Surface. 1.5" ID, Schedule 40 PVC Riser. Bentonite Seal Placed in Annulus. 1.5" (D, Schedule 40 PVC, 0.010"-Slotted Well Screen Grade #1 Silica Sand Pack Placed in Annulus. Piug Point Orlil Cuttings Placed in Annulus. Approximate Water Level During Drilling NA - Not Available due to PID Malfunction Static Water Level

BORING LOG AND WELL CONSTRUCTION DIAGRAM Well No: MW-3 BLACK RIVER PRODUCE Project #89941586 PROCTORSVILLE, VERMONT 10/19/99 Date Installed: Griffin Project #: 89941586 Drilling Method: Vibratory Direct Push Drilled by: Griffin International Graphic Symbol 2.75* Boring Diameter.: Driller: Gerry Adams Letter Symbol Development Method: Peristaltic Pump Supervised by: TJK 10 Ft. Screened Length: Logged by: TJK Soil Characteristics Pen/Rec (*) Interval (*) Well Construction Gravel Surface Blow Count PID (ppm) Grade = 0 SM SILTY SAND (SM) --0 - 5.0 5/3.0 0.40 medium to light brown, moist 0.80 1.20 Ft<Grade 1.60 2.00 2.80 3.20 3.60 4.00 4.40 4.80 SAME AS ABOVE 5/3.0 5.0 - 5.7 5.20 SILTY SAND (SM) 5.60 SILT (ML) 5.7 - 6.2 6.00 ML SILTY SAND WITH GRAVEL (SM) 6.2 - 10 6.40 medium orange brown, moist 7.24 6.80 A 7.20 11/9/99 7.60 8.00 8.40 8.80 9.20 9.60 SM SILTY SAND WITH GRAVEL (SM) --4/1.8 10.0 - 14.5 10.00 medium brown, wet 10.40 10.80 11.60 12.00 12.40 12.80 13.20 13.60 14.00 Base of Exploration. 14.5 14.40 14.80 15.20 15.60 16.00 Ledgend Road Box with Bolt Down Cover, Set in Cement. Locking Plug. 1.5" ID, Schedule 40 PVC Riser. Existing Surface. 1.5" ID, Schedule 40 PVC, 0.010"-Slotted Well Screen Bentonite Seal Placed in Annulus. Plug Point Grade #1 Silica Sand Pack Placed in Annulus. Drill Cuttings Placed in Annulus. Approximate Water Level During Drilling Static Water Level NA - Not Available due to PID Malfunction



APPENDIX C

Liquid Level Data

Liquid Level Monitoring Data Black River Produce, Route 103, Proctorsville, Vermont VTDEC Site No. 99-2622

Monitoring Date: 11-9-99

Well I.D.	Top of Casing Elevation	Depth to Product	Depth to Water	Water Table Elevation
MW-1	100.00		7.25	92.75
MW-2	99.65	<u>-</u>	7.00	92.65
MW-3	99.84	-	7.24	92.60

Note: All values reported in feet. Surveyed 10/19/99



APPENDIX D

Groundwater Quality Data

Summary of Groundwater Quality Data Black River Produce, Route 103, Proctorsville, Vermont VTDEC Site No. 99-2622

	· · · - T	11-9-99		
PARAMETER	MW-1	MW-2	MW-3	VGES*
мтве	ND(10)	ND(10)	ND(10)	40
Benzene	ND(1)	ND(1)	ND(1)	5
Toluene	ND(1)	ND(1)	ND(1)	1000
Ethylbenzene	ND(1)	ND(1)	ND(1)	700
Xylenes	ND(1)	ND(1)	ND(1)	10000
Total BTEX	ND(1)	ND(1)	ND(1)	•
1,3,5-Trimethylbenzene	ND(1)	ND(1)	ND(1)	4
1,2,4-Trimethylbenzene	ND(1)	ND(1)	ND(1)	5
Naphthalene	ND(1)	ND(1)	ND(1)	20
Total Targeted VOCs	ND(10)	ND(10)	ND(10)	
TPHs (mg/L)	ND(0.4)	ND(0.4)	ND(0.4)	

All values reported in ug/L (ppb) unless otherwise noted.

Detections are Bold

Values greater than the applicable Vermont Groundwater Enforcement Standard (VGES) are shaded ND(1) - Not Detected (Detection Limit)

Samples analyzed by EPA Method 8021B.



APPENDIX E

Groundwater Analytical Report



Laboratory Services

32 James Brown Drive Williston, Vermont 05495 (802) 879-4333 FAX 879-7103

REPORT OF LABORATORY ANALYSIS

CLIENT: Griffin International

May 11986

ORDER ID: 4870

PROJECT NAME: Black River Produce

REF.#: 147,193 - 147,197

REPORT DATE: November 22, 1999 DATE SAMPLED: November 9, 1999

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody. Chain of custody indicated sample preservation with HCl.

All samples were prepared and analyzed by requirements outlined in the referenced method and within the specified holding times. All instrumentation was calibrated with the appropriate frequency and verified by the requirements outlined in the referenced method. Blank contamination was not observed at levels affecting the analytical results.

Analytical method precision and accuracy was monitored by laboratory control standards which included matrix spike, duplicate and quality control analyses. These standards were determined to be within established laboratory method acceptance limits.

Individual sample performance was monitored by the addition of surrogate analytes to each sample. All surrogate recovery data was determined to be within laboratory QA/QC guidelines unless otherwise noted.

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Reviewed by,

Harry B. Locker, Ph.D. Laboratory Director

enclosures



Laboratory Services

32 James Brown Drive Williston, Vermont 05495 (802) 879-4333 FAX 879-7103

EPA METHOD 8021B--PURGEABLE AROMATICS

CLIENT: Griffin International

DATE RECEIVED: November 10, 1999

PROJECT NAME: Black River Produce

REPORT DATE: November 22, 1999

CLIENT PROJ. #: 89941586

ORDER ID: 4870

Ref. #:	147,193	147,194	147,195	147,196	147,197
Site:	Trip Blank	MW-1	MW-2	MW-2 Duplicate	MW-3
Date Sampled:	11/9/99	11/9/99	11/9/99	11/9/99	11/9/99
Tîme Sampled:	8:10	14:58	15:13	15:13	15:29
Sampler:	JR	JR	JR	JR	JR
Date Analyzed:	11/21/99	11/21/99	11/21/99	11/22/99	11/21/99
UIP Count:	0	2	2	2	3
Dil. Factor (%):	100	100	100	100	100
Surr % Rec. (%):	94	94	95	109	94
Parameter	Conc. (ug/L)	Conc. (ug/L)	Conc. (ug/L)	Conc. (ug/L)	Conc. (ug/L)
MTBE	<10	<10	<10	<10	<10
Веплепе	<1	<1	<1	<1	<1
Toluene	<1	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1	<1
1,3,5 Trimethyl Benzene	<1	<1	<1	<1	<1
1.9.4 This make J. Danier	<1	<1	<1	<1	<1
1,2,4 Trimethyl Benzene					

Note: UIP = Unidentified Peaks TBQ = Trace Below Quantitation NI = Not Indicated

ENDYNE, INC.

160 James Brown Drive
Williston, Vermont 05495
(802) 879-4333

CHAIN-OF-CUSTODY RECORD

D-05 34479

Project Name: BLACK RIVER PRODUCE Site Location: PROCTORSVILLE VT.	Reporting	g Address: Opp	FIN		Billi	ng Address:	RIFFIN			
Endyne Project Number: 4870	Company Contact I	· · · · · · ·	TK		Sampler Name: J. ROCKLIN					
Lab# Sample Location J	G Matrix R A B	C O M Date/Time	Sam No.	pie Containers Type/Size	17, 11,170%	sults/Remarks	Analysis Required		Rush	
147193 TRIP BLANK P	A20 V	0810	7	40ml			80216	3 HCL		
147194 MW-1		1458	Î				8021E	3		
/ww-l		1458					80sD			
147195 AW-2		1513					SOZIE	3		
MW-2		1513		e e e e e e e e e e e e e e e e e e e			801574	20		
147196 MW-Z DUPLICATE		1513					8021E	»	<u> </u>	
147197 MW-3		1529	- Communication				Score			
MW-3	VV	1529	V			,	8015 DA	20 1/	<u> </u>	
Relinquished by: Signature	Received t	by: Signature Hac	46	enjamin	Date/	Time ////0/9	Cy	11:031	4u-	
Retinquished by: Signature	Received 1	by: Signature	1/	16/	Date/	Time	<u> </u>	11:4	3	
New York State Project: Yes No		Requeste	d Analy	ses						
1 pH 6 TKN		Total Solids	16	Metals (Specify)	21	EPA 624	26	EPA 8270 B/N ox /	Acid	
2 Chloride 7 Total P		TSS	17	Coliform (Specify)	22	EPA 625 B/N or A	27	4		
3 Ammonia N 8 Total Diss. P 4 Nitrite N 9 BOD.		13 TD\$		COD	23	EPA 418.1	28 EPA 8080 Pest/PCB		В	
4 Nitrite N 9 BOD ₅ 5 Nitrate N 10 Alkalinity		Turbidity Conductivity	19 20	EPA 601/602	24	EPA 608 Pest/PCB EPA 8240				
29 TCLP (Specify: volatiles, semi-volatiles, metals, pesticides, herb	L		<u> </u>					<u> </u>		
30 Other (Specify):										



Laboratory Services

32 James Brown Drive Williston, Vermont 05495 (802) 879-4333 FAX 879-7103

LABORATORY REPORT

CLIENT: Griffin International

ORDER ID: 4870

PROJECT: Black River Produce/#89941586

DATE RECEIVED: November 10, 1999

REPORT DATE: November 24, 1999

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody. Different groups of analyses may be reported under separate cover.

All samples were prepared and analyzed by requirements outlined in the referenced methods and within the specified holding times.

All instrumentation was calibrated with the appropriate frequency and verified by the requirements outlined in the referenced methods.

Blank contamination was not observed at levels affecting the analytical results.

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Analytical method precision and accuracy was monitored by laboratory control standards which included matrix spike, duplicate and quality control analyses. These standards were determined to be within established laboratory method acceptance limits, unless otherwise noted.

Reviewed by,

Harry B. Locker, Ph.D. Laboratory Director

enclosures



Laboratory Services

32 James Brown Drive Williston, Vermont 05495 (802) 879-4333 FAX 879-7103

LABORATORY REPORT

CLIENT: Griffin International

PROJECT: Black River Produce/#89941586

REPORT DATE: November 24, 1999

ORDER ID: 4870

DATE RECEIVED: November 10, 1999

SAMPLER: JR

ANALYST: 128

Ref. Number: 147194	Site: MW-1	Date Sampled: November 9, 1999 Time: 2:58 P.								
Parameter	Result	<u>Uni</u> ţ	<u>Method</u>	Analysis Date						
TPH 8015 DRO	< 0.40	mg/L	SW 8015B	11/22/99						
D-6 N 1 147105	G: 2077 G									
Ref. Number: 147195	Site: MW-2		Date Sampled: November 9, 1999 Time: 3:13							
<u>Parameter</u>	Result	<u>Unit</u>	Method	Analysis Date						
TPH 8015 DRO	< 0.40	mg/L	SW 8015B	11/22/99						
Ref. Number: 147197	Site: MW-3		Date Sampled: November	r 9, 1999 Time: 3:29 PM						
Parameter	Result	<u>Unit</u>	Method	Analysis Date						
TPH 8015 DRO	< 0.40	mg/L	SW 8015B	11/22/99						

CHAIN-OF-CUSTODY RECORD

Project Name: BLACK RIVER PRODUCE Site Location: PROCTORSVILLE VT.					Reporti	ng Addr	ess: GRA	FIN			Billir	ng Address:	N PIFFIN			
Endyne Project Number: 4870				(Company: Contact Name/Phone #GRIFFIN TK					Sampler Name: J. ROCKLIN						
Lab#	Sámple	Locati	on	Matrix	G R A B	C O M	Date/Time	Samp No.	le Containe Type/Size	sasa 1	Field Res	sults/Remarks	Analysis Require		Sample reservation	Rush
14719	3 TRIP BLAN	1K		H20	フ		0810	2	40M				20211	3	HCL	,
14719				ſ			1458	T					802 U		-	
	NW-l	• • • •					1458						8050	êσ		7~~
14719							1513						802N	В		
1-1-1-1-	MW-2						1513						BOLSD	2 0		
14719		NPL:	LATE				1513						Eccus			
14719		,,,,,					1529						80211			
1777	MW-3	•		V	7	/	1529		1 4			· · · · · · · · · · · · · · · · · · ·	80120		V	
	////												1 2	-		
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Relinquish	ned by: Signature		-		Receive	1 by: Sign	iature Stace	1 B	enjai	nin	Date/	Time 11/10/C	99		1:03	1000
Relinguis	hor by: Signature BIN/	an	ins		Receive	d by: Sign			1/2	/	Date/	Time	1C		1.4	/3
	State Project: Yes	No					Requested	Analy	ses							
1	ьн	6	TKN		11	Total Sol	ids	16	Metals (Spec	cify)	21	EPA 624	26	EPA	8270 B/N	or Acid
2	Chloride	7	Total P		12	TSS		17	Coliform (S	pecify)	22	EPA 625 B/N or A	27	EPA	8010/8020	
3	Ammonia N	8	Total Diss. P		13	TDS		18	COD		23	EPA 418.1	28	EPA	8080 Pest/	PCB
5	Nitrite N	9 10	BOD _s Alkalinity		14	Turbidity Conducti		19 20	BTEX EPA 601/60	^	24	EPA 608 Pest/PCB				
29	Nitrate N TCLP (Specify: volatiles, sem	<u> </u>	1	harbicides)	L	Constitu	2.7		EFA OVIAO	4	25	EPA 8240	I	<u> </u>	- :	
30	Other (Specify):	7- + OH# 0110	e, moune, pescolotes,			 -							.			
[L	Care (opens)).		····						·					<u> </u>		